

USSR

SAVCHENKO, Yu. G.

"Correcting Automata"

Sistemy Avtomatich. upr. [Automatic Control Systems -- Collection of Works],
Kiev, 1971, pp 33-40, (Translated from Referativnyy Zhurnal, Kibernetika,
No 2, 1972, Abstract No 2 V411).

NO ABSTRACT.

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USSR

SAVCHENKO, Yu. G.

"Properties of Redundant Alphabetic Sets"

Sistemy Avtomatich. upr. [Automatic Control Systems -- Collection of Works],
Kiev, 1971, pp 7-13 (Translated from Referativnyy Zhurnal, Kibernetika, No
2, 1972, Abstract No 2 V487 by L. Bassalygo).

Translation: Certain elementary facts from the theory of coding are reported.

1/1

USSR

UDC: 51:621.391

SAVCHENKO, Yu. G.

"Synthesis of Threshold Networks With Self-Correction of Errors"

V sb. Teor. kibernetika. Vyp. 2 (Theoretical Cybernetics--collection of works, No 2), Kiev, 1970, pp 59-70 (from RZh-Kibernetika, No 1, Jan 71, Abstract No 1V397)

Translation: As the author points out, the errors which arise in threshold networks are specific, and are due to the instability of the parameters of individual threshold elements. It is proposed that nonlinear codes be used to eliminate these errors.

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USSR

UDC 538.4

GORBACHEV, L. P. and SAVCHENKO, Yu. N.

"Magnetosonic Signal Generation by an Acoustical Wave Pulse in an Anisotropic Conducting Medium"

Riga, Magnitnaya gidrodinamika, No 1, 1973, pp 85-89

Abstract: This paper investigates theoretically the generation of a magnetosonic signal by an acoustical wave pulse in an anisotropically conducting partially ionized medium. The generating system is considered in the orthogonal x, y, z space with an external uniform magnetic field directed along the z axis, and all quantities varying only in the x direction. For $x < x_1$, where x_1 is some particular value, the gas medium in which the generation occurs is un-ionized; the ionized medium is considered to be three-component, consisting of ions, electrons, and neutral particles. The magnetic pressure is assumed much larger than the gas-dynamic pressure, and the collisions of the charged particles are neglected. Beginning with the linearized equations of ion and electron motion, the authors derive the magnetosonic wave equation through the Maxwell equations with the displacement current neglected. A numerical example is considered. The authors thank V. M. Lazarev for doing

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USSR

GORBACHEV, L. P., et al, Magnitnaya gidrodinamika, No 1, 1973, pp 85-89

the calculations of the numerical example on the electronic computer.

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SAVCHENKO Yu. N.

SOME CHARACTERISTICS OF THE HYDRODYNAMICS OF AN ENGINE OF THE "FLAPPING WING TYPE"

JPRS 55942
15 May 72

[Article by Yu. N. Savchenko, Kiev, Kiev, Ukraine, Russian, No 3, 1971, Izd-vo "Naukova Dumka", pp 11-19]

The broad use of the screw engine as a means for creating thrust in mechanical objects is the result of simplicity in bringing about rotational movement. The widespread occurrence of an engine of the "flapping wing" type in living nature can be attributed to the fact that for living organisms, oscillatory motion is simplest. The theory of design of supporting screws and propellers is now well developed. This makes possible their effective use in different swimming regimes. However, in some cases the measured parameters of movement of animals made it possible to establish a high efficiency and superiority of "flapping" engine complexes, and this has attracted the close attention of researchers.

The great interest in the engines created by nature can be attributed to the fact that as a result of thousands of years of evolution and the natural selection process in the improvement of the natural flapping engine nature could make use of still uninvestigated effects of interaction between a flapping wing and a surrounding fluid. To use Prandtl's expression, a theoretical investigation of this problem is a matter of transcendental difficulty [3].

Below we describe some characteristics and advantages of an engine of the "flapping wing" type in accordance with the results obtained in an investigation of the hydrodynamic characteristics of a flapping wing on a specially designed oscillatory apparatus at the Hydromechanics Institute Academy of Sciences Ukrainian SSR.

Acc. Nr: **AP 0047313**

Ref. Code: UR 0300

PRIMARY SOURCE: *Ukrayns'kiy Biokhimichniy Zhurnal*, 1970,
Vol 42, Nr 1, pp 28-30

ELENIUM EFFECT ON ACTIVITY
OF BRAIN ADENOSINE TRIPHOSPHATASES

Z. I. Savchenko

The I. M. Sechenov First Medical Institute, Moscow

Summary

In experiments with albino rats the effect was studied of elenium administrated perorally in a dose of 0.5 mg/kg on activity of ATPases stimulated by Ca^{2+} , Mg^{2+} , Na^{+} and K^{+} .

It is shown that 30 min after administrating the preparation the activity of $\text{Ca}^{2+} + \text{Mg}^{2+}$ -ATPases lowers in mitochondria of the stem and cortex. The different effect of the preparation was observed on activity of $\text{Na}^{+} + \text{K}^{+}$ -ATPases of mitochondria of the cortex and stem part of the brain: in the former it lowers, in the latter it is not changed. The differences in the effect of the preparation on $\text{Na}^{+} + \text{K}^{+}$ -ATPases of mitochondria of the stem and cortex are peculiar to supernatant fraction as well: elenium provoked an increase in the activity of the brain stem and did not change it in the cortex.

The preparation did not affect swelling of brain mitochondria.

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REEL/FRAME
19790831

221

USSR

UDC 621.172.62-408.3

PASHKOV, P. O., YAVOR, A. A., SAVCHENKOV, E. A., KOTOV, N. V., SKLYAROV, N. M., MIKHEYEV, A. A., and PLATONOV, A. A., Volograd Polytechnic Institute, All Union Scientific Research Institute of Aviation Materials

"Properties of High-Strength Clad Sheet Steel in Tension"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 12, 1973, pp 37-40

Abstract: Specimens of VKS-1 steel, 1.5 mm thick, clad with the corrosion-resistant KhN76T (EI435) alloy, 13-15% of sheet thickness, were tested for mechanical properties by the method: axial tension - static bending - biaxial tension - tensile fracture (crack sensitivity). The investigation results indicate that VKS-1 clad steel possesses higher strength and plasticity in comparison with steel without cladding and higher resistance to rupture. The strength of VKS-1 steel in biaxial tension comes up to maximum values; besides, the strength in axial tension is 20-25% higher than the strength of homogeneous VKS-1 steel. The application of electrosag remelting contributes to increased plasticity under tension for high-strength clad steel, but to a smaller degree than for homogeneous steel. Three figures, two tables, seven bibliographic references.

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USSR

UDC 621.791.669.018.8

TRUBILKO, V. I., Engineer, SAVCHENKOV, V. A., Candidate of Technical Sciences, and GUREVICH, S. M., Doctor of Technical Sciences

"Corrosion Resistance of Weld Joints of the Bimetal Titanium-Steel"

Kiev, Avtomaticheskaya Svarka, No 12 (249), Dec 73, pp 66-67

Abstract: The corrosion resistance of joints of the bimetal titanium-steel has been tested at the Khar'kov By-Product Coke Plant. The bimetal with sublayer was produced by rolling in vacuum at 1000 degrees C and 20-percent rolling reduction. Vanadium was used as the sublayer. Investigations showed that the corrosion resistance of joints made from the bimetal titanium-steel and from titanium is practically the same. Parts made from this bimetal in 1968 are still functioning. In corrosion resistance this bimetal surpasses Kh18N9T steel by 20 times and can be successfully used for the manufacture of equipment operating in aggressive media instead of titanium and stainless steel. The article contains 1 figure which shows welded parts made of the bimetal titanium-steel and 1 bibliographic reference.

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USSR

UDC 621.791:621.9-419:620.193.4

TRUBILKO, V. I., SAVCHENKOV, V. A., SOTNIK, I. S. Ukrainian Scientific Research Institute of Metallurgy, and GUREVICH, S. M., Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences UkrSSR

"Corrosion Resistance of Titanium-Steel Bimetal"

Kiev, Avtomaticheskaya Svarka, No 9, Sep 70, pp 16-18

Abstract: An investigation was made of the corrosion resistance of titanium-steel bimetal and its welded junctions in sulfuric and hydrochloric acids of various concentrations, and also in a mixture of sulfuric acid (density 1.64 g/cm³) with calcium chlorate Ca(ClO₃)₂ (100-140 g/l). The preparation of samples and the experimental procedures are described. The bimetal was obtained by rolling, in a 5 x 10⁻³ mm Hg vacuum with 20% compression at 1000°C. The base layer was formed by 8-mm St 3 steel (GOST 380-60), the plating layer by 2-mm VT1-I (AMTU475-1-61) titanium, and the sublayer by 0.1-mm (TsMTUO5-31-66) vanadium. Corrosion was determined by the loss in sample weight and evaluated with a metal resistance scale (GOST 5272-50). The corrosion rate of titanium bimetal and its welded combinations as a function of sulfuric and hydrochloric acid concentrations is presented in a graph.

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USSR

TRUBILKO, V. I., et al., Avtomaticheskaya Svarka, No 9, Sep 70, pp 16-18

The results show that 1) in up to 60% H_2SO_4 and up to 30% HCl concentrations the corrosion rate of bimetal and its combinations is the same, and practically does not differ from the rate of VTI-1 titanium; 2) the corrosion disintegration of bimetal and its combination, as well as of VTI-1 titanium occurs uniformly in solutions of sulfuric and hydrochloric acids; 3) the bimetal and its combination possess a high corrosion resistance in solutions of sulfuric acid and calcium chlorate used in the production of chlorine dioxide. 3 figures, 1 table.

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USSR

UDC 539.3:534.1

SAVCHENKOV, V. I.

"Study of the Free Vibrations of Reinforced Hollow Shells"

V sb. Prostranstv. konstruktsii v Krasnoyarsk. kraye (Three-Dimensional Structures in the Krasnoyarsk Region -- Collection of Works), Krasnoyarsk, 1972, pp 113-121 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V210)

Translation: Symmetrical free vibrations of reinforced hollow shells are discussed without consideration of tangential components of the inertial forces. The problems are reduced by the finite difference method to a solution of the problem of the eigenvalues of the matrices of the coefficients of these equations. Author's abstract.

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USSR

UDC 669-419:669.24'26'27'28

SAVCHUK, A. N., and OL'SHANETSKIY, V. YE., Zaporozh'ye Machine Building Institute,
~~Chair of the Science of Metals~~

"The Effect of Alloying Additions on Structural Changes in Nickel-Molybdenum
materials"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya,
No 3, 1973, pp 138-142

Abstract: A study was made of the effect of various alloying additions (introduced as powder into an Ni-Mo composite material) on the recrystallization process of Mo wire and the formation of transition zones. Besides EI435 and EP646 heat-resistant alloys, electrolytic nickel rolled to 0.5 mm thickness, was used as initial matrix. It was determined that the intensive recrystallization in the peripheral layer of Mo wire results from diffusion penetration of Ni. In this case, a zone of increased hardness develops on the matrix-filler boundary due to formation mainly of NiMo intermetallic. The diffusion of Cr and Mo develops most intensively from the wire periphery; the transition diffusion zones possesses low microhardness. The powder ligature (30%Cr+5%W+3%Mo), introduced between matrix sheets from electrolytic Ni, contributes to an active suppression
1/2

USSR

SAVCHUK, A. A. and OL'SHANETSKIY, V. YR., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 3, 1973, pp 138-142

of recrystallization processes in the whole extent of Mo wire and sharply lowers the microhardness of the transition zone. One figure, two tables, eight bibliographic references.

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USSR

UDC: 612.813.08

SKOK, V. I., SAVCHUK, V. S., and REMIZOV, I. N., Laboratory of Vegetative Ganglion Physiology (Headed by V. I. Skok), A. A. Bogomol'ts Institute of Physiology

"Analyzer of the Electrical Activity in the Fibers of an Intact Nerve"

Leningrad, Fiziologicheskii zhurnal SSSR im. I. M. Sechenova, No 10, vol 58, 1972, pp 1638-1641

Abstract: The description is given of an instrument for analyzing the natural pulses of nerve fibers which avoids the deficiencies of earlier instruments designed for this purpose. Construction of the instrument is such as to permit selection of the pulses of particular fibers out of all the pulses of the nerve. A block diagram of the instrument together with a discussion of its operation is given, and the article is illustrated with a photograph of its external view. The front-panel devices and their functions are explained. Operation of the analyzer was checked by investigating the pulses from the erratic nerve of a cat synchronous with its respiration. A curve giving the results of that investigation is reproduced.

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USSR

UDC 621.372.824

YERUKHIMOV, A. Kh., SAVCHUK, L. L., TROK, R. A., USOV, A. F.

"Analysis of Optimal Relations in a Coaxial System with Combined Insulation"

Elektrofiz. apparatura i elektr. izolyatsiy (Electrophysics Equipment and Electrical Insulation), Moscow, Energiya Press, 1970, pp 387-392 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8B149)

Translation: This article contains an analysis of optimal relations in a coaxial system with combined insulation formed by dielectrics with different dielectric constants. Three cases are investigated: a dielectric with a smaller dielectric constant is applied to the internal electrode, the external electrode and both electrodes simultaneously. The auxiliary conditions are constancy of the thickness of the dielectric with lower dielectric constant or constancy of the cross section of the dielectric with higher dielectric constants. The relations permitting selection of the parameters of the system which insures minimum field intensity in the given dielectric are obtained. There are three illustrations.

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1/2 021

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--CHOLINESTERASE ACTIVITY IN DIFFERENT PARTS OF THE BRAIN IN
EXPERIMENTAL GANGLIONTERAKIDOSIS -U-

AUTHOR--(02)-SAVCHUK, N.A., SOLDATENKO, T.A.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39
NR 2, PP 205-206

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHOLINESTERASE, ACETYLCHOLINE, ENZYME ACTIVITY, BRAIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1990/1435

STEP NO--UR/0358/70/039/002/0205/0206

CIRC ACCESSION NO--AP0109495

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--APO109495

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTS IN WHITE RATS
DEMONSTRATED THAT IN EXPERIMENTAL GANGLIOTERAKIDOSIS CAUSED BY
GANGLIOTERAKIS SPUMOSA THE CAPACITY OF DIFFERENT PARTS OF THE BRAIN FOR
HYDROLYSIS OF ACETYLCHOLINE WAS REDUCED CONSIDERABLY. THE GREATEST FALL
IN THE ACTIVITY OF THE ENZYME WAS FOUND IN THE BRAIN HEMISPHERES OF
INFECTED RATS. FACILITY: ODESSKIY UNIVERSITET IM. I. I.
MECHNIKOVA.

UNCLASSIFIED

1/2 021
UNCLASSIFIED
TITLE--CHOLINESTERASE ACTIVITY IN DIFFERENT PARTS OF THE BRAIN IN
EXPERIMENTAL GANGLIONTERAKIDOSIS -U-
AUTHOR--(02)-SAVCHUK, N.A., SOLODARENKO, T.A.
PROCESSING DATE--02OCT70
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL 39
NR 2, PP 205-206
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CHOLINESTERASE, ACETYLCHOLINE, ENZYME ACTIVITY, BRAIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1435
STEP NO--UR/0358/70/039/002/0205/0206
CIRC ACCESSION NO--APO109495
UNCLASSIFIED

2/2 021

CIRC ACCESSION NO--AP0109495

UNCLASSIFIED

PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTS IN WHITE RATS
DEMONSTRATED THAT IN EXPERIMENTAL GANGLIOTERAKIDOSIS CAUSED BY
GANGLIOTERAKIS SPUMOSA THE CAPACITY OF DIFFERENT PARTS OF THE BRAIN FOR
HYDROLYSIS OF ACETYLCHOLINE WAS REDUCED CONSIDERABLY. THE GREATEST FALL
IN THE ACTIVITY OF THE ENZYME WAS FOUND IN THE BRAIN HEMISPHERES OF
INFECTED RATS.
MECHNIKOBA.

FACILITY: ODESSKIY UNIVERSITET IM. I. I.

UNCLASSIFIED

172 014 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--COILING DOWN OF PRODUCT I MASSECUTE FROM CONCENTRATED SIRUPS -U-
AUTHOR--(C5)--BELOSTOTSKIY, G.S., SAVCHUK, N.K., MELNIK, V.I., KOT, YU.D.,
BELOSTOTSKIY, L.G.
COUNTRY OF INEC--USSR
SOURCE--SANK. PROM. 1970, 44(4), 48-51
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--FOOD TECHNOLOGY, SUCROSE, GRANULE FORMATION, PARTICLE SIZE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0301 STEP NO--UR/C339/70/044/004/0048/0051
CIRC ACCESSION NO--AP0135796
UNCLASSIFIED

2/2 014

CIRC ACCESSION NO--AP0135796

UNCLASSIFIED

PROCESSING DATE--11DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BOILING DOWN OF MASSECUITE FROM CONCD. SIRUPS IS COMPARED WITH BOILING DOWN FROM AQ. MIXES. ON EVAPG. A SIRUP CCNTG. SIMILAR TO 70PERCENT DRY SUBSTANCES IN VACUUM WITHOUT JUICE MIXES OR AQ. MIXES, THE PRODUCTIVITY OF THE VACUUM EVAPERATOR INCREASES BY 10PERCENT, THE COLOR INDEX OF THE SUGAR IS 0.1 UNIT LESS, AND THE REMAINING CRITERIA CHARACTERIZING MASSECUITE QUALITY ARE NO WORSE THAN WITH MASSECUITE BOILED DOWN WITH THE AID OF AQ. OR JUICE MIXES. THE PARTICLE SIZE DISTRIBUTION OF THE SUGAR CRYSTALS IS ABOUT THE SAME WITH BOTH METHODS. THE METHOD IS RECOMMENDED FOR BOTH CONCD. AND CONVENTIONAL SIRUPS. FACILITY: SVEKLOSAKHAROTREST, VINNITSY, USSR.

UNCLASSIFIED

1/2 030
UNCLASSIFIED
PROCESSING DATE--13NOV70
TITLE--SLOWING UP FAST CRACKS BY CERTAIN STRUCTURAL DEFECTS -U-
AUTHOR--(05)--FINKEL, V.M., VORONOV, I.N., SAVELEV, A.M., ELISENKO, A.I.,
FEDOROV, V.A.
COUNTRY OF INFO--USSR
SOURCE--PROBLEMY PROCHNOSTI, VOL. 2, MAR. 1970, P. 8-16
DATE PUBLISHED----MAR70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--TRANSFORMER STEEL, CRACK PROPAGATION, LITHIUM FLUORIDE, SODIUM
CHLORIDE, LATTICE DEFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0122
STEP NO--UR/3663/70/002/000/0008/0016
CIRC ACCESSION NO--AP0123894
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123894

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE INTERACTION OF A FAST, BRITTLE CRACK WITH THE MECHANICAL TWINS IN TRANSFORMER STEEL AND WITH THE SLIP BANDS IN LIF AND NaCl CRYSTALS. FAST MICROKINEMATOGRAPHY AND PHOTOPLASTICITY METHODS WERE USED IN THIS STUDY. IT IS SHOWN THAT THE CROSSING OF TWINS OR SLIP BANDS BY A CRACK IS ACCOMPLISHED BY A HIGHLY PRONOUNCED SHEAR AND LOCAL PLASTIC STRAIN. THE AMOUNT OF TWINS AND SLIP BANDS FOR COMPLETE INHIBITION OF CRACK PROPAGATION IS DETERMINED FOR DIFFERENT INITIAL PROPAGATION RATES. FACILITY: TAMBOVSKII INSTITUT KHIMICHESKOGO MASHINOSTROENIIA, TAMBOV, USSR.

UNCLASSIFIED

USSR

UDC 547.541.6:541.127

LITVINENKO, L. M., PARAMONOV, L. A., and ~~SAVILOVA, V. A.~~ Donetsk Branch of the Institute of Physical Chemistry Imeni L. V. Pisarsky, Acad. Sc. UkrSSR, Donetsk State University.

"Kinetics of the Phosphorylation of Aromatic Amines With Dimethyl Chlorophosphates"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 38, No 2, Feb 72, pp 165-169

Abstract: Reaction kinetics of aniline with dimethylchlorophosphate in nitrobenzene solutions are reported. The rate of the phosphorylation was determined by potentiometric determination of the unreacted amine with sodium nitrite in hydrochloric acid solution. After a short induction period, which varied depending on the concentrations of starting materials, the reaction appears to reach a steady state. It was shown that, depending on the reaction conditions -- concentration of the reagents, temperature -- the main process of aniline acylation with dimethyl chlorophosphate is complicated by a side reaction of N-alkylation of the aromatic amine. By keeping the concentrations of the reagents in the range 0.01-1 M/l and the temperature at 25°C, it was possible to eliminate entirely the N-alkylation side reaction.

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1/2 014 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--MECHANISM OF ARENESULFONAMIDE CATALYSIS OF THE REACTION OF AROMATIC
AMINES WITH CARBOXYLIC ACID HALIDES -U-
AUTHOR-(03)-LITVINENKO, L.M., SAVELOVA, V.A., SKRIPKA, A.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 886-94
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SULFONAMIDE, CATALYST ACTIVITY, AROMATIC AMINE, CARBOXYLIC
ACID, HALOGENATED ORGANIC COMPOUND, CHLORINATED AROMATIC COMPOUND,
ANILINE, BENZOYL CHLORIDE, CHEMICAL KINETICS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1512 STEP NO--UR/0079/70/040/004/0886/0894
CIRC ACCESSION NO--AP0135173
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135173

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. KINETIC DATA WERE TABULATED FOR ACYLATION OF N,CLC SUB6 H SUB4 NH SUB2 WITH BZCL AND AC SUB2 O, AND OF P,MEOC SUB6 H SUB4 NH SUB2 BY BZF, IN C SUB6 H SUB6 IN THE PRESENCE OF RC SUB6 H SUB4 SO SUB2 NR SUB2. THE UNSUBSTITUTED SULFONAMIDES OR THOSE WITH A SINGLE ALIPHATIC OR AROMATIC SUBSTITUTENT AT THE N ATOM ARE EFFECTIVE CATALYSTS FOR THE REACTION, THOSE WITH 2 ALIPHATIC SUBSTITUTENTS ARE BUT FEEBLY ACTIVE, AND THOSE WITH 1 ALIPHATIC AND 1 AROMATIC SUBSTITUENT ARE TOTALLY INEFFECTIVE. IN RC SUB6 H SUB4 SO SUB2 NHC SUB6 H SUB4 R A WIDE RANGE OF VARIATIONS OF THE R GROUPS HAD BUT LITTLE EFFECT ON THE CATALYTIC CAPABILITY. THE RESULTS SUGGEST A BIFUNCTIONAL CATALYSIS BY THE SULFONAMIDES IN THESE CAYLATIONS, PROBABLY VIA FORMATION OF CYCLIC INTERMEDIATES OF TRIMOLECULAR TYPE IWHT THE 2 REACTANTS, IN WHICH THE O ATOM OF THE SO SBU2 AND THE NH GROUP TAKE PART IN A FORM OF HYDROGEN BONDING. FACILITY: DONETS, OTD. FIZ.-ORD. KHIM., INST. FIZ. KHIM. IM. PISARZHEVSKOGO, DONETSK, USSR.

UNCLASSIFIED

1/2 011
UNCLASSIFIED
TITLE--REACTIVITY OF ALCOHOLS WITH WATER DURING ACIDIC CATALYTIC REACTION
WITH ETHYLENE OXIDE -U-
AUTHOR--(03)--LEBEDEV, N.M., SAVELYANOV, V.P., SHVETS, V.F.
PROCESSING DATE--20NOV70
COUNTRY OF INFO--USSR
SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 111-16
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--METHANOL, ALCOHOL, ETHYLENE OXIDE, ACID CATALYSIS
CENTRCL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1163
STEP NO--UR/0379/70/006/001/0111/0116
CIRC ACCESSION NO--AP0128585
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0128585

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BINARY MIXTS. MECH, ROH AND H SUB2
O, ROH, WHERE R IS ME, ET, PR, AND ISO, PR, WERE TREATED WITH ETHYLENE
OXIDE IN 0.01-0.03 M HClO SUB4 AND THE FOLLOWING RELATIVE REACTIVITIES R
SUBMEOH EQUALS K SUBMEOH-K SUBMEOH AND R SUBH SUB2 O EQUALS K SUBH SUB2
O-K SUBROH DETD.: ME, NEGATIVE, 0.70; ET, 1.20, 0.80; PR, 1.40, 0.87;
AND ISO, PR, 1.60, 1.10. RELATIVE REACTIVITIES WERE DEPENDENT ON THE
ACIDITY CONSTS.: R SUBMEOH EQUALS (K SUBMEOH-K SUBROH) PRIMEO.13 AND R
SUBH SUB2 O EQUALS 0.8 (K SUBH SUB2 O-K SUBROH) PRIMEO.13.
FACILITY: MOSK. KHIM. TEKHNOL. INST. IM, MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.373.826

DOBZHANSKIY, G. F., KULEVSKIY, L. A., SAVEL'YEV, A. D., SMIRNOV, V. V.

"Discrete Frequency Tuning of Emission on the Second Harmonic on a Lithium Iodate Crystal From a Carbon Monoxide Laser"

Kratkiye soobsheniya po fiz. (Brief Reports on Physics), 1972, No 6, pp 13-17 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 13D146 by A. K.)

Translation: The authors report on achieving emission on the second harmonic on a lithium niobate crystal with CO laser pumping. Rearrangement of the spectrum of the transformed emission is effected discretely in the 2.5-2.8 μm range by changing the angle between the optical axis and the direction of propagation of the emission on the fundamental frequency. The laser operates in the Q-switched mode. Switching is done by a reflecting wedge rotating at 125 Hz. Peak emission power on the second harmonic is 4 mW for a pulse duration of 2 μs . In the emission spectrum of the second harmonic, 2-3 lines are observed with effective conversion. By increasing the length of the crystal (5 mm or more) and reducing the divergence of pumping emission to 30' or less, it is possible to achieve effective conversion of emission in the spectral region of 0.01 μm and less, which corresponds to the individual lines of a CO laser.

1/1

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USSR

DAVIDOV, A. A., KULEVSKIY, L. A., PROKHOROV, A. K., SAVEL'YEV, A. D., and SMIRNOV, V. V., Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR

"Parametric Oscillation of a CdSe Crystal With Pumping From a $\text{CaF}_2:\text{Dy}^{2+}$ Laser"

Moscow, Pis'ma v Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 15, No 12, 20 Jun 72, pp 725-727

Abstract: The authors report obtaining parametric oscillation for the first time of a CdSe semiconductor crystal. The parametric radiation wavelengths were 3.37 and 7.86 microns. The pumping source used was a Q-switched $\text{CaF}_2:\text{Dy}^{2+}$ crystal laser with a laser wavelength of 2.36 microns and a repetition rate of 1 Hz. The resonator of the parametric oscillator was formed by two plane-parallel dielectric mirrors applied to fluorite substrates. The authors thank YU. N. POLIVANOV for useful discussions.

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USSR

UDC 8.74

SAVEL'YEV, A. G.

"Procedure for Synthesizing Microprogram Automata Using Permanent Memories"

V.sb. Avtomaty i upr. (Automata and Control--collection of works), Moscow, Nauka, 1972, pp 44-50 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V419)

Translation: A study was made of a procedure for constructing a microprogram automaton circuit using a standard permanent memory. A method of synthesizing the multiprogram automata using a permanent memory the functioning algorithm of which is given in the language of logical circuits of the algorithms is proposed.

1/1

USSR

UDC 621.315.592

ANDRIANOV, D. G., ~~SAVEL'YEV, A. S.~~, FISTUL', V. I., State Scientific Research and Planning and Design Institute of the Rare Metals Industry of Moscow

"Magnetic Susceptibility of Gallium Arsenide Strongly Alloyed with Tellurium"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 5, 1972, pp 853-857

Abstract: The experimental setup and results are presented from an investigation of the magnetic susceptibility of gallium arsenide alloyed with tellurium in the concentration range from $3 \cdot 10^{17}$ to $1.4 \cdot 10^{19} \text{ cm}^{-3}$. The measurements were taken by the Faraday method in the temperature range of 4.2-300°K. The existence of paramagnetic centers was detected in the low-temperature range near the temperature of liquid helium, although the investigated samples did not contain impurity atoms with unclosed d or f-shells. The paramagnetism was temperature-dependent and caused by the presence of the admixture atoms. The concentration of the magnetic centers as a function of the Hall concentration of the charge carriers is described by a curve with peaks. Curves are presented showing the dependence of the number of paramagnetic centers on the degree of alloying and the effect of the nature of the impurity in the Te, Se and S series on the negative reluctance in GaAs. Heat treatment converting the tellurium atoms to different states in the crystal lattice also changes the concentration of the paramagnetic centers.

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USSR

UDC: 8.74

ALEKSEYEV, V. Ye., BULATOVA, I. G., SAVEL'YEV, A. Ya.

"Description of the 'Avtor' Language"

Kiev, Mat. i inform. probl. prognozir. i upr. naukoy--sbornik (Mathematical and Informational Problems in the Prediction and Control of Science--collection of works), 1971, pp 123-136 (from RZh-Kibernetika, No 10, Oct 72, abstract No 10V629)

Translation: The paper describes the "Avtor" automatic programming language. A unit of action in the language is an operator. The basis of recording is a sequence of events separated by a symbol (virgule). Attached to the sequence of events are a question in which the student is given a problem in addition to an explanation, and a marked "wait" operator. Such a combination of question, "wait" operator and sequence of events is called a topic in the "Avtor" language. The instructors program is a sequence of topics. The Backus notation is used to describe the structure of the language. A fragment of recording of academic information in the "Avtor" language is presented.

1/1

USSR

UDC 8.74

ALEKSEYEV, V. YE., SAVEL'YEV, A. YA., BULATOVA, I. G.

"Determining the requirements on the AVTOR Input Language"

V sb. Mat. i inform. probl. prognozir. i upr. naukoy (Mathematical and Information Problems of Forecasting and Control of Science--collection of works), Kiev, 1971, pp 136-146 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V445)

Translation: The requirements on the AVTOR input language in which the exchanged messages between the instructor, the people and the training complex are written or defined. The most important requirements are the following: 1) the language must be simple, generally intelligible and close to the natural language, for example, the language of mathematics; 2) the language must so far as possible evaluate any answers by the student; 3) the language must permit introduction of any changes into the training programs, that is, correction of them as the instructor desires and also checking for correctness of writing of the training programs. The set of symbols available on the Consul electric typewriter was selected as the input language alphabet. A study was made of the rules for writing messages which are exchanged between the instructor and the student with the training complex. The AVTOR language is constructed by the interpreting program principle. Three types of operators are used in it to write the correct answers: the answer, the keyword and the range of numbers. For each

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USSR

ALEKSEYEV, V. YE., et al., Mat. i inform. probl. prognozir. i upr. naukoy,
Kiev, 1971, pp 136-146

question there is one correct response operator, several operators of the fore-
seen incorrect answers, the operator for an unforeseen incorrect answer and
also the "assistance" and "prompting" operators. The consolidated block dia-
gram of the master program executing the AVTOR language is presented.

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USSR

UDC: 621.892:621.7.016.3

SAVEL'YEV, B. A.

"A Cutting Compound for Machining Titanium or Titanium Alloys"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 22, Aug 72, Author's Certificate No 345190, Division C, filed 14 Jan 70, published 14 Jul 72, p 101

Translation: This Author's Certificate introduces: 1. A water-based cutting compound for machining titanium or titanium alloys. As a distinguishing feature of the patent, the effectiveness of the paste is increased by adding water-soluble titanium salts, higher aliphatic alcohols, mineral oil or liquid fats, kerosene, water-soluble organic acids, and a gelatinizing agent such as starch. 2. A cutting fluid distinguished by the fact that it contains (in wt.%): water-soluble titanium salts -- 0.01-4.0, higher aliphatic alcohols -- 0.01-3.0, mineral oil or liquid fats -- 0.2-6.0, kerosene -- 0.01-4.0, water-soluble organic acids -- 0.2-5.0, gelatinizing agent -- 0.2-5.0. water -- to make 100.

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SAYEL'YEV, B.A.

JPLS 59208
6.73

V-7. OBTAINING BORON PHOSPHIDES FROM THE GAS PHASE

Article by B. A. Sayel'yev, V. N. Doronin, V. A. Krenov, V. I. Yerdokimov, Moscow; Novosibirsk, Ill. Sibirskiy Nauchno-Issledovatskiy Tsentr Poluprovodnikov, Krasnoyarsk, Novosibirsk, 12-17 June, 1972, p. 53]

On the basis of the results of the thermodynamic analysis of the reactions of joint reduction of boron and phosphorus halogenides and also the experimental study of the processes of reducing boron trichloride and phosphorus trichloride with hydrogen, an estimate was made of the conditions of obtaining boron phosphides from the gas phase.

A study was made of the dependence of the deposition rate of the boron phosphides on the temperature (800-1400 degrees) and the ratio of the phosphorus trichloride to boron trichloride from 1 to 5 (with a constant hydrogen flow rate and feed rate of the reaction mixture).

The conditions of obtaining monocrystalline films of boron phosphides with deposition on silicon are defined.

Some electrophysical properties of the boron phosphide films were investigated.

USSR

UDC: 621.394.14.037.372.2

SAVEL'YEV B. A.

"Comparison of Multiposition and Binary Methods of Transmission With Amplitude Demodulation"

Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR (Works of Academic Institutes of Communications. Ministry of Communications of the USSR), 1971, vyp. 53, pp 121-129 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3A45)

Translation: Taking equality of data transmission rates by a message source as a basis, a comparison is made of multiposition and binary transmission methods with redundant and non-redundant codes. A comparison is made between the effectiveness of codes in multiposition transmission systems and equivalent optimum binary codes. Resumé.

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USSR

UDC 621.377.622.322.5.002.2(088.8)(47)

SAVEL'YEV, B. I., MARINGULOV, K. A., and VASIL'YEV, P. P.

"A Method of Manufacturing Phototemplates for Multilayer Printed Thin-Film Circuit Boards"

USSR Author's Certificate No 280594, Filed 7 Oct 68, Published 17 Nov 70
(from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 8B104 P)

Translation: A method of manufacturing phototemplates for multilayer printed thin-film circuit boards is suggested. It is based on making the masters from a set of flat mock-ups of parts and contact areas, which are interconnected by tracing elements covered with a sticky compound that simulates printed conductors. In order to simplify the process of manufacturing phototemplates, the masters are made by direct and mirror arrangement of the press. Two circular conductors of different colors are arranged in parallel and used as tracing elements; one of them has a diameter equal to the width of a printed conductor, while the other has a diameter equal to the minimum clearance between neighboring printed conductors. Alignment of contact areas in the masters of the current-carrying layers (starting with the second layer) is effected by a pinhole through the center of the contact

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USSR

SAVEL'YEV, B. I., et al., USSR Author's Certificate No 280594, Filed 7 Oct 68, Published 17 Nov 70 (from Referativnyy Zhurnal -- Avtomatika, Telemekhanika, i Vychislitel'naya Tekhnika, No 8, 1971, Abstract No 83104 P)

area of the first current-carrying layer. In the masters of the insulating layers there is an opening whose diameter is equal to the diameter of the openings in the printed circuit board.

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USSR

UDC: 621.396.6.049.7

BABAYANTS, S. S., SAVEL'YEV, B. I.

"Analysis of Registration of the Holes in Ferrite Plates When They are Assembled Into Stacks"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1970, vyp. 5(26), pp 50-65 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V276)

Translation: The authors discuss the possibility of simplifying the process of wire-threading and stacking ferrite multiapertured memory plates for the accumulators in miniature memory elements. Computations are given for registration of the holes of memory plates in a stack for various hole tolerances and distances between centers together with a registration curve which can be used for proper selection of the grade and diameter of wire for threading and stacking memory plates, as well as for evaluating the feasibility of mechanizing this process. Authors' abstract.

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USSR

UDC: 621.396.6-181.5

FROLOV, N. D., SAVEL'YEV, B. I.

"On the Problem of Evaluations of Surface Roughness in Microelectronics"

Elektron. tekhnika. Nauch.-tekhn. sb.. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1970, vyp. 5(26), pp 78-83 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V156)

Translation: The authors discuss criteria for evaluation of surface roughness. It is shown that existing criteria are inadequate for evaluating the operational properties of working surfaces. Parameters are proposed for estimating the height and shape of microscopic irregularities and the non-uniformity of these irregularities. Resumé.

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USSR

UDC: 621.3.049.75

~~SAVEL'YEV, B. I.~~, MARINGULOV, K. A., VASIL'YEV, P. P.

"A Method of Making Photo Templates for Multilayer Thin-Film Printed Circuit Boards"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 28, 1970, Soviet Patent No 280594, Class 21, filed 7 Oct 68, p 52

Abstract: This Author's Certificate introduces a method of making photo templates for multilayer thin-film printed circuit boards. The procedure is based on the preparation of photo originals from a set of flat models of components and contact areas interconnected by layout elements which simulate printed-circuit conductors and are coated with a sticky substance. As a distinguishing feature of the patent, the process of making the photo templates is simplified by making the photo originals with direct and mirror reflection arrangement of the printed material, and using two parallel circular conductors as the layout elements. These conductors are of different colors, one of them being the same diameter as the printed-circuit conductor, while the diameter of the other is equal to the minimum clearance between adjacent printed-circuit conductors. The contact areas are centered on the photo originals of current-conducting layers (beginning with the second layer) by passing a needle through the center of the contact area of the first current-conducting layer, while holes are punched through the photo originals of insulating layers with a diameter equal to that of the holes in the printed-circuit board.

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USSR

UDC 621.3.049.75

MARINGULOV, K. A., SAVEL'YEV, B. I.

"A Device for Connecting Microcircuits"

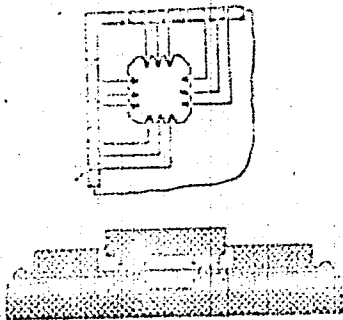
Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki,
No 19, 1970, Author's Certificate No 272406, Filed 7 Oct 68, p 52

Abstract: This author's certificate introduces a device for connecting microcircuits together. The device contains a commutation plate whose contact areas coincide with those of the microcircuits. As a distinguishing feature of the patent, the quality of the contact connections is improved by placing an intermediate dielectric plate between the microcircuit and the commutation plate. On this plate is an aperture with bracket studs having contact areas on the ends which connect with the contact areas located on the periphery of the intermediate plate to connect the source of current to the contact areas of the bracket studs when a metal layer is galvanically plated on them.

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USSR

MARINGULOV, K. A., et al., Otkrytiya, Izobrateniya, Promyshlennyye Obraztsy,
Tovarnyye Znaki, No 19, 1970, Author's Certificate No 272406, Filed 7 Oct
68, p 52



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1/2 021 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CONTROLLED ELECTROLUMINESCENT INDICATORS ON A SEIGNETTE CERAMIC
BASE --U--
AUTHOR--(03)--ANTIPOV, B.L., GUNAYEVA, V.A., SAVELYEV, G.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. Leningr. ELEKTROTEKH. IN-TA (BULLETIN OF Leningrad
REFERENCE--RZH-ELEKTRONIKA I YEYE PRIMENIYE, NO 4, APRIL 1970, ABSTRACT NO
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, MATERIALS
TOPIC TAGS--ELECTROLUMINESCENCE, CERAMIC MATERIAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/1527 STEP NO--UR/3014/70/000/080/0102/0107
CIRC ACCESSION NO--AR0138526
UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE: 11/11/01
CIRC ACCESSION NO--AR0138526
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CONTROLLED INDICATOR IS
DESCRIBED IN WHICH THE ELECTROLUMINESCENT AND CONTROL ELEMENT ARE
TECHNOLOGICALLY UNITED IN A SINGLE WHOLE. A SEIGNETTE CERAMIC WAFER,
WHICH IS ALSO THE BASIC INDICATOR, IS USED AS THE CONTROL ELEMENT. THE
CHARACTERISTICS OF THE CONTROL OF SUCH AN INDICATOR ARE PRESENTED.

UNCLASSIFIED

USSR

UDO 621.316.345:621.387.322.3

ANTIPOV, B.L., IZUMRUDOV, O.A., LAZAREVA, N.P., SAVEL'YEV, G.A.

"Production Of Multicolor Electroluminescent Panels"

Izv. Leningr. elektrotekhn. in-ta (Journal Of The Leningrad Electrical Engineering Institute), 1972, Issue 108, pp 175-179 (from RZh:Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No 11B356)

Translation: A variation was developed of a photographic method of producing electroluminescent panels. A glass substrate with a transparent electrode of stannic oxide is covered by a thin (10--15 micron) layer which is easily dissolved in organic solvents of lacquer (e.g., nitrocellulose). On the surface of the lacquer film a protective stencil is established by the method of photochemical treatment of a photoresist based on polyvinyl alcohol, which cuts off specific sections of the lacquer film. Subsequently, a continuous layer of an electroluminophor with a specified color of luminescence is deposited onto the surface of the substrate. Fixing of the luminophor on the shield photoresist sections is achieved with treatment by the vapors of a lacquer solvent. The unbound luminophor is easily withdrawn from the shielded sections, after which the shield stencil is removed and at the sections of lacquer films which had become exposed the process of fixing a luminophor of another color is repeated.

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USSR

ANTIPOV, B.L., et al., Izv. Leningr. elektrotekhn. in-ta, 1972, Issue 108, pp 175-179

Multicolor panels 0.1--0.2 mm wide can be produced by this method. The merit of the method is the almost total absence of losses of luminophor because the luminophor removed from the sections unrestrained at the substrate is not contaminated by the bonding and can be used a second time without additional cleaning. I.V.

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USSR

UDO 621.396.69:621.391.63

KUZ'MENKO, N.N., PASYNKOVA, O.V., SAVEL'YEV, G.A.

"Photosensitive Films Elements For Optoelectronic Devices With Optical And Electrical Coupling"

Izv. Leningr. elektrotekhn. in-ta (Journal Of The Leningrad Electrical Engineering Institute), 1972, Issue 108, pp 151-157 (from RZh:Elektronika i yeye primeneniye, No 11, Nov 1972, Abstract No 11B371)

Translation: During the creation of bistable d-c optrons consisting of series-connected photoresistors and electroluminescent emitters (EE), difficulties appear during matching of the elements with respect to conductivity. The development is described of a film photoresistor suitable for direct coupling with a film EE, which emits in the 580-586 nm region with a 20-volt voltage and a current density of 20-25 mA/cm². The photoresistor was produced by the method of successive build-ups on a rotating preheated glass substrate of layers of CdS, CdSe, and CdCl₂ with subsequent annealing in air. The composition of the film of a photoresistor which has a spectral characteristic matched with the EE corresponds to the formula CdS_{0.46}Se_{0.54} for which evaporation of CdS and CdSe is carried out with their weight ratio 3:2. The current-voltage and spectral characteristics of the photoresistor are given. 5 ill. 4 ref. N.S.

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172 010 UNCLASSIFIED PROCESSING DATE--300C170
TITLE--PASCHEN BACK EFFECT FOR THE MUONIUM ATOM -U-

AUTHOR--(05)--MINAYCHEV, YE.V., MYASISHCHEVA, G.G., OBUKHOV, YU.V., ROGANOV,
V.S., SAVELYEV, G.I.
COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,
NR 5, PP 1586-1592
DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LONGITUDINAL MAGNETIC FIELD, MAGNETIC FIELD INTENSITY,
MAGNETIC POLARIZATION, MUON, SINGLE CRYSTAL PROPERTY, QUARTZ, CORUNDUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/2236

STEP NO--UR/0056/70/058/005/1586/1592

CIRC ACCESSION NO--AP0127598

UNCLASSIFIED

2/2- 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127598

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLARIZATION OF MU PRIME POSITIVE MESONS AS A FUNCTION OF LONGITUDINAL MAGNETIC FIELD STRENGTH IS MEASURED BETWEEN 0 AND 3 KOE IN SINGLE CRYSTAL QUARTZ AND CORUNDUM. FOR QUARTZ THE EXPERIMENTAL DATA ARE FOUND TO BE IN GOOD AGREEMENT WITH THE THEORY OF MUONIUM DEPOLARIZATION. THE EXPERIMENTAL VALUE OF THE CRITICAL MAGNETIC FIELD STRENGTH FOR MUONIUM IN QUARTZ EQUALS WITHIN THE EXPERIMENTAL ERRORS THE VALUE OBTAINED IN VACUUM. THE POSSIBILITIES WHICH THE METHOD AFFORDS FOR MEASURING THE SIZE OF MUONIUM IN VARIOUS MEDIA ARE CONSIDERED.

UNCLASSIFIED

USSR

UDC:541.113

ANTANOVICH, A. A., PLOTNIKOV, M. A., SAVEL'YEV, G. Ya., Moscow

"Area of Applicability of Virial Equation of State With Various Numbers of Virial Coefficients"

Novosibirsk, Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 267-272

Abstract: The most general form of the equation of state suitable for use over a broad range of gas temperatures is the virial form of the equation. Some results are presented in this article from numerical investigation of the area of applicability of this equation using various numbers of terms in the virial series. These results can be used in the practice of thermodynamic calculations, since in many cases definition of the optimal number of terms in the series depending on the required calculation accuracy is important both from the standpoint of decreasing error resulting from using insufficient numbers of terms and from the standpoint of decreasing the volume of computation by reducing the number of terms as greatly as possible. The investigation is performed for nitrogen in the temperature

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USSR

UDC:541.113

ANTANOVICH, A. A., PLOTNIKOV, M. A., SAVEL'YEV, G. Ya., Novosibirsk,
Fizika Goreniya i Vzryva, Vol. 6, No. 3, Sep 70, pp. 267-272

range from 300-3000°K. The results indicate that in the 1000-3000°K range, the use of five virial coefficients is quite sufficient for practical application of the equation at pressures up to several tens of kilobars. At temperatures over 3000°K, the pressure at which the formula can be used exceeds 100 Kbar.

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Acc. Nr: **AP0044180**

Ref. Code: **UR9115**

PRIMARY SOURCE: **Ortopediya, Travmatologiya i Protezirovaniye,**
1970, Nr 1, pp 42-46

FUNCTIONAL APPARATUSES OF THE UPPER EXTREMITIES

E.I. Plamm and **L. A. Savel'yev**

The article is a review of functional apparatuses of the upper extremity. Various types of powered apparatuses with external sources of energy are analyzed. A classification and fields of application of control systems for powering devices are submitted. The expediency of utilization of the damaged extremity itself as the source of control signals is founded. This may be realized with help of bio-electrical control systems. The features of bioelectrical signals of paralyzed muscles and the difficulties of control organization with aid of such signals have been shown. The authors present a description and comparison of the control systems for powering the apparatus, one of which has been realized at the „Los Amigos“ Clinic (California, USA), and the other — at the Central Institute of Prosthetics and Prosthesis Construction. The actuality of construction of functional apparatuses with several pairs of controllable motions is emphasized.

REEL/FRAME
19770665

USSR

UDC 539.3

SAVEL'YEV, L. M., KHAZANOV, KH. S.

"Integrating the Equation of a Flat Cylindrical Shell in Polar Coordinates"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institution), 1971, No. 48, pp 22-31 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3V209)

Translation: The equation of a flat cylindrical shell relative to a complex function is investigated (Vlasov, V. Z., Obshchaya teoriya obolochek i yeye prilozheniya v tekhnike (General Theory of Shells and Its Applications in Engineering), Moscow, Gostekhizdat, 1949) in polar coordinates. A set of particular solutions of the homogeneous equation corresponding to different forms of self-balanced load applied along the edge of the circular cut is sought. Solutions for the case of self-balancing loads and loads leading to a moment relative to the diameter of the circular cut lying in the plane of the cross section of the cylinder and normal to its axis were given previously (Savin, G. M., Guz', O. M., Dopovidi AN UkrSSR, 1964, No. 11, pp 1456-1459: RZhMekh, 1965, 8V106). The boundary conditions for other edges of the shell besides the circular cut are not discussed. 8 ref. O. B. Lozhkin.

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USSR

UDC 629.78.015.4

SAVEL'YEV, L. M.

"Distribution of Stress About a Circular Aperture in a Plate Considering Physical Nonlinearity of the Material"

Tr. Kuybyshev. Aviats. In-t. [Works of Kuybyshev Aviation Institute], No 48, 1971, pp 32-40, (Translated from Referativnyy Zhurnal, Raketostroyeniye, No 2, 1972, Abstract No 2.41.162 by T. A. Ye.).

Translation: Consideration of plastic deformations during determination of stresses about apertures in a flat plate is a complex task. At the present time, satisfactory solutions of this problem have been produced only for cases when the plastic area fully encompasses the contour of the aperture. For the case when the plastic zone partially encompasses the contour of a circular aperture, an approximate method of calculation of stress concentration is used, ignoring radial and tangential stresses arising in the plate. A numerical method is suggested for solution of this problem, based on strict utilization of all equations in the planar problem of the theory of small elastic-plastic deformations. 4 Figures; 8 Biblio. Refs.

1/1

SAVEL'YEV, L. N.

SPRS 56, 499
14 JUL 72

155

The results of the investigations revealed that the effectiveness of air purification in 53% of the cases exceeded 90%, and in 16% of the cases attained 100%. However, in 26% of the cases the effectiveness did not exceed 75%. The mean weighted effectiveness was 87%. It should be noted that when

Our investigations were made under conditions characterized by atmospheric contamination by finely dispersed aerosols whose concentration in individual cases exceeded the maximum admissible concentration (MAC). The investigations were made at several working places in precise accordance with the Method of Investigation of the Effectiveness of Respirators (Lepestok) (see Appendix 1, "Method of Investigation of the Effectiveness of Respirators" (Under Operating Conditions)). The time required for taking a sample was 30-60 minutes. The duration of presence of the subjects continuously at the working place varied from two to three hours. During rest in a clean zone the respirator was removed and then used again.

The "Lepestok" mask is now the most widely used means for individual protection of the organs of respiration. The theoretical protective capability of the respirator, according to the instructions on use of the "Lepestok" respirator, is about 90%, that is, it almost does not differ from the intercepting properties of filters made of PFP fabric. However, information on the actual effectiveness of respirators used under working conditions could not be found in the available literature.

Article by L. N. Savel'ev, A. N. Bulgina, N. V. Gumenitskiy and G. P. Kozlov, Moscow, Akademiya Voprosy Kozmicheskoy Biologii i Meditsiny (Current Problems in Space Biology and Medicine), Moscow, 1971, pp. 333-336.

SAINTAN-HIGIENIC EVALUATION OF THE PROTECTIVE EFFECTIVENESS OF THE "LEPESTOK" MASK FOR FINELY DISPERSED AEROSOLS

1/2 006 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--REPRESENTATIONS OF NONCOMPACT GROUPS U (P, Q). I -U-
AUTHOR--(02)-LEZNOV, A.N., SAVELYEV, M.V. S
COUNTRY OF INFO--USSR
SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 2, NR 3, PP
311-327
DATE PUBLISHED-----70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--GROUP THEORY, MATHEMATIC TRANSFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/2037

STEP NO--UR/0646/70/002/003/0311/0327

CIRC ACCESSION NO--AP0102066

UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0102066

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD IS PROPOSED FOR THE CONSTRUCTION OF IRREDUCIBLE REPRESENTATIONS OF NON COMPACT PSEUDOUNITARY GROUPS $U(P, Q)$. THE METHOD IS BASED ON TRANSITION FROM THE REGULAR REPRESENTATION OF THE GROUP TO THE "LIMIT" REPRESENTATION, WHICH IS OBTAINED FROM THE REGULAR ONE, WHEN NONCOMPACT PARAMETERS GO TO INFINITY.

UNCLASSIFIED

USSR

UDC 621.327.53

BRYUNIN, V. N., ONOPKO, D. I., SAVEL'YEV, P. V.

"A Device for Determining the Optimum Parameters of the Elements of Electronic Circuits"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 23, 1970, Author's Certificate No 276523, Filed 23 Nov 68, pp 139-140

Abstract: This author's certificate introduces a device for determining the optimum parameters of the elements of electronic circuits. The device contains a circuit model, a measurement unit, an actuator and a control module. As a distinguishing feature of the patent, speed is increased and testing reliability is improved by adding modules for checking restrictions and the extremum, as well as series connected units for analysis, selection of the extremum direction and organization of motion. The analysis unit is also connected to the control module through the unit for checking restrictions, and to the unit for checking the extremum. The latter unit is connected in turn to the control module.

1/1

Acc. Nr.: AN0104031

Ref. Code: UR0567

AUTHOR-- SAVEL, YEV. S.

TITLE-- THE AVIATION OF GREAT POTENTIAL

NEWSPAPER-- KNIZHNOYE OBOZRENIYE, MAY 29, 1970, P 4, COLS 1-3

ABSTRACT-- THE ARTICLE REVIEWS "THE SOVIET AVIATION AIRCRAFT" - /SOVETSKAYA AVIATIONNAYA TEKHNIKA/, AN ALBUM CONTAINING MORE THAN 300 COLOR AND BLACK-AND-WHITE ILLUSTRATIONS OF SOVIET AIRCRAFT UNDER THE EDITORSHIP OF A. N. TUPOLEV, S. V. IL, YUSHIN, ET. AL., PUBLISHED BY THE "MASHINOSTROYENIYE".

IT CONSISTS OF THE FOLLOWING FOUR SECTIONS--

/1/ "FIRST FLIGHTS", WHICH DEALS WITH THE FIRST STEPS OF THE SOVIET AVIATION.

1/2

REEL/FRAME

19870382

4

Acc. Nr.: AN0104031

Ref. Code: _____

/2/ "IN THE WAR AND PEACE SKIES", WHICH DESCRIBES THE SOVIET AIR-
CRAFT OF THE SECOND WORLD WAR.

/3/ "THE AVIATION OF GREAT POTENTIAL"

/4/ "THE MIGHT OF OUR WINGS", TWO SECTIONS DEALING WITH SOVIET
AIRCRAFT FROM TU-104 THROUGH "ANTEY" AND TU-144.

THE LAST PAGES OF THE ALBUM SHOW THE SOVIET MILITARY AIRCRAFT.

2/2

KZ

REEL/FAME

19870383

USSR

SAVAL'YEV, V. A., Moscow

UDC 624.074.04.2.04

"Effect of Initial Imperfections in Shape and Nonuniformity in Load on the Stability of a Spherical Mesh Dome With Rigid Nodes"

Podol'sk, Stroitel'naya mekhanika i raschet sooruzheniy, No. 5, 1971, pp 32-34

Abstract: Nonlinear relationships are derived relating the load and the mutual displacements of nodes considering initial deviations from the spherical surface and nonuniformity of the load. It is assumed that all rods of the dome have the same length; although it is pointed out that in actual geometrical designs of domes this condition cannot be satisfied exactly since it is possible to produce a surface of double curvature from identical elements. Since the process of loss in stability in a mesh dome is of a clearly local nature and consists of extruding nodes toward the center of curvature, this condition is understood in the sense that the lengths of the rods belonging to one node do not essentially differ from one another and therefore practically all designs for the construction of cupolas satisfy this requirement. Two methods of loading and correspondingly two possible forms of stability loss are discussed. The relationships can be used to evaluate both the total stability of the mesh

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USSR

SAVAL'YEV, V. A., *Stroitel'naya mekhanika i raschet sooruzheniy*, No. 5, 1971,
pp 32-34

dome or buckling of nodes of the dome and the local stability or longitudinal
bending of the rods.

2/2

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PREPARATION AND PROPERTIES OF A BARIUM SILICAT ALUMINA CEMENT -U-
AUTHOR--(02)-SAVELYEV, V.G., KULIKOVA, N.V.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHES. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(2), 245-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--CEMENT, ALUMINA, BARIUM COMPOUND, SILICATE, MECHANICAL
STRENGTH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1105 STEP NO--UR/0153/70/013/002/0245/0247
CIRC ACCESSION NO--AT0134791
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0134791

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. QUICK SETTING CEMENTS, STABLE IN DRY AND MOIST AIR, ARE PREPD. FROM TECH. BACO SUB3, AL SUB2 O SUB3, SIO SUB2, AND PROSYANDVSK KAOLIN (36PERCENT AL SUB2 O SUB3, 46PERCENT SIO SUB2) IN FORMULATIONS DESIGNED TO PROVIDE RATIOS OF 2BAO.SIO SUB2 TO BAO.AL SUB2 O SUB3 1:1, 2:1, 3:1, AND 4:1 BY WET MILLING TO PRODUCE PARTICLES SMALLER THAN 60 MU, PRESSING, AND FIRING AT 1200-1350DEGREES FOR TIME PERIODS SUCH AS TO ACHIEVE THE MAX. TEMP. IN 1, 2, 4, AND 6 HR. THE OPTIMUM PROPERTIES OF THE CEMENT ARE OBTAINED FOR (2BAO.SIO SUB2)-(BAO.AL SUB2 O SUB3) EQUALS 3:1, A FIRING TEMP. OF 1350DEGREES, AND A HEATING CYCLE OF 2 HR. THIS COMPN. MAINTAINED STRENGTHS OF LARGER THAN 500 KG-CM PRIME2 AFTER 90 DAYS HOLDING IN AIR, MOIST AIR, AND H SUB2 O. FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SYNTHESIS OF CALCIUM SILICATE HYDRATES FROM NONAQUEOUS SOLUTIONS
AND A STUDY OF THE PROPERTIES OF $2\text{CaO} \cdot \text{SiO}_2$ SUB2 PREPARED FROM IT -U-
AUTHOR--(03)-BUDNIKOV, P.P., KUZNETSOVA, I.P., SAVELYEV, V.G.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. KHIM. TEKHNOL. 1970, 13(1), 96-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CALCIUM COMPOUND, SILICATE, HYDRATE, HYDRATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1388 STEP NO--UR/0153/70/013/001/0096/0099
CIRC ACCESSION NO--AT0120181
UNCLASSIFIED

2/2 010
 CIRC ACCESSION NO--AT0120181 UNCLASSIFIED
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA HYDRATED SILICATE, OF COMPN.
 1.7CAO.SIO SUB2.2.9H SUB2 O AND 1.7CAO.SIO SUB2.3.2H SUB2 O, CONTG. 0.30
 AND 1.96 WT. PERCENT NA SUB2 O, IS PREPARED. IN A FIBROUS AND VERY FINE
 PLATELIKE TOBERMORITIC FORM BY HOMOGENIZING ALC. SOLNS. OF SI(OET) SUB4
 AND CACL SUB2 IN 1:2 MOLE RATIO, ADDING THE NECESSARY AMT. OF AQ. NAOH
 FOR SAPONIFICATION, SEPG. THE MOTHER LIQUOR, AND WASHING WITH 80PERCENT
 ETOH TO FREE THE PPT. FROM NA POSITIVE AND CL NEGATIVE. THE LOWER
 CONTENT OF NA SUB2 O IS OBTAINED BY LONGER WASHING. THE ANHYD. 2CAO.SIO
 SUB2 IS OBTAINED BY FIRING AT 800-1500DEGREES FOR 3 HR AT THE MAX. TEMP.
 SAMPLES CONTG. BOTH THE LESSER AND GREATER AMOUNTS OF NA SUB2 O FIRED
 AT 800DEGREES CONSISTED OF BETA 2CAO.SIO SUB2 AND SHOWED THE GREATEST
 STRENGTH AFTER HYDRATION AND AGING; WITH THE LOWER AMT. OF NA SUB2 O,
 THE SAMPLE FIRED AT 1500DEGREES CONSISTED OF GAMMA 2CAO.SIO SUB2 AND
 SHOWED THE LOWEST STRENGTH AFTER HYDRATION AND AGING. SAMPLES CONTG.
 THE LARGER AMT. OF NA SUB2 O AND FIRED AT 1000-1500DEGREES RETAINED BETA
 2CAO.SIO SUB2, AND EXHIBITED INTERMEDIATE STRENGTH AFTER HYDRATION AND
 AGING. FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. MENDELEEVA,
 MOSCOW, USSR.

UNCLASSIFIED

EQUIPMENT
Marine

USSR

UDC 621.396.963.31

SAVEL'YEV, V. P.

"A Plan-Position Indicator for Use With Radar Stations"

Leningrad, Sudostroyeniye, No 6, June 72, pp 51-53

Abstract: The "Ladoga" marine electronic situation indicator has been developed as an auxiliary in avoiding collision between three approaching ships. The small-size device (624 x 914 x 1,300 mm), intended for use with the "Okean" radar station, can be cut into the panel of a navigational complex when necessary.

The screen of the indicator provides a radar image of the surrounding area, oriented on the meridian at a scale of 16 miles per working screen radius (picture tube, 31 cm). Four illuminated lines appear on the screen, one solid and three broken; the latter indicate relative motion of approaching objects, the length of the line segments being proportional to speed of the object, and indicating the relative displacement of the object in 10 minutes.

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USSR

SAVEL'YEV, V. P., Sudostroyeniye, No 6, June 72, pp 51-53

Plant tests of the indicator show accuracy of $\pm 2^\circ$ or better for directional indications, and $\pm 10^\circ$ for time indications.

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USSR

UDC: 621.385.632.001.5

SAVEL'YEV, V. S., KUSHCHENKO, G. I.

"Experimental Study of a Traveling-Wave Tube With Radial Electron Flux"

Moscow, Radiotekhnika i Elektronika, Vol 15, No 12, Dec 70, pp 2567-2573

Abstract: A structural description is given of a device in which the decelerating system is a radial spiral line made up of logarithmic spirals. A radial electron stream flows close to the turns of the spirals. It is shown on experimental models of the device that there is an increase in the amplitude of electromagnetic oscillations along the radius in the "radial line - radial electron flux" system, i.e. amplification of the cylindrical electromagnetic wave. A gain of 10-22 DB is realized in the 200-600 MHz range with an output power of 50-100 mW when the collector current is 12-16 mA and the spiral voltage is 35-40 V. Problems of shaping radial electron fluxes by magnetic and electromagnetic fields are considered. It is shown that a radial Estatron can be built. The use of a radial decelerating system and radial electron flux makes it possible to build flat wide-band low-voltage devices with comparatively high current. The construction of a traveling-wave tube with radial electron flux may be useful for miniaturizing SHF vacuum devices since the flat design opens up possibilities for using thin-film techniques in construction.

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USSR

SAVEL'YEV, V.S., SINYAVSKIY, G.P.

UDC 537.533.3:621.385.6

"The Propagation Of Space Charge Waves In A Radial Electron Stream (Summary Of Deposited Manuscript)"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVOn (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue No 10, p 51 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A155)

Translation: The problem is considered of the characteristics of space charge waves in a radial electron stream on the basis of a common solution of the equations of the total current, continuity, movement, and convection current. Expressions are obtained in an approximation of the theory of small signals, which describe the alternating components of the current and velocity along the electron stream, the radial velocity of which is changed according to the power law. The transfer constant matrixes are obtained which makes it possible, with respect to the values of the current and velocity at the input of the radially divergent electron stream, to determine their values at an arbitrary point of the electron stream. Graphs are constructed characteristic of the behavior of the transfer constant matrixes from the radius with different types of change of the constant components of the velocity. The conditions are found for increase and decrease of

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SAVEL'YEV, V.S., et al, Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh,
1970, Issue No 10, p 51

the amplitude of the alternating components of the current and velocity along the electron stream. An analysis of the results obtained shows that in comparison with the ordinary linear electron stream, a faster suppression takes place of velocity modulation in the accelerated and faster increase of the current modulation in the decelerated radially divergent electron stream, caused by a decrease of the constant component of the space charge density along the electron stream. Summary.

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1/2 019
TITLE--THE VALUE OF VAGOTOMY IN SURGERY OF ULCEROUS DISEASE OF THE STOMACH
AND DUODENUM -U-
AUTHOR-(02)-SAVELYEV, V.S., UMBRUMYANTS, O.A.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 4, PP
80-85
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CRANIAL NERVE, SURGERY, DUODENUM, LESION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0037
CIRC ACCESSION NO--AP0105136
STEP NO--UR/0589/70/104/004/0080/0085
UNCLASSIFIED

2/2 019
CIRC ACCESSION NO--AP0105136
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT. IN THE PAPER SOME ASPECTS OF SURGICAL TREATMENT OF ULCEROUS DISEASE OF THE STOMACH AND DUODENUM, AND ESPECIALLY THE POSSIBILITIES OF USING VAGOTOMY TO THIS END ARE BEING CONSIDERED. IT IS BELIEVED TO BE MORE RATIONAL TO USE VAGOTOMY AS AN ACCESSORY METHOD OF TREATMENT. A NEW TECHNIC OF SELECTIVE VAGOTOMY PROVIDING PRESERVATION OF CARDIAC BRANCHES OF BOTH VAGUS NERVES WAS ELABORATED. THE NECESSITY OF REMOVING ULCEROUS BED UNDERLIES THE SELECTION OF THE BASIC TYPE OF SURGICAL PROCEDURE ON THE STOMACH. ECONOMIC GASTRECTOMY AND MORE RARE PYLOROPLASTY ARE FELT TO BE MOST ADVANTAGEOUS IN THIS RESPECT. ACCORDING TO THESE PRINCIPLES WITHIN THE RECENT YEAR 55 SELECTIVE VAGOTOMIES HAVE BEEN PERFORMED (73 VAGOTOMIES BEING ACCOMPLISHED PREVIOUSLY), IN 42 OF THESE CASES IN COMBINATION WITH ECONOMIC GASTRIC RESECTION AND IN 3 CASES IN COMBINATION WITH PYLOROPLASTY. THE ANALYSIS OF IMMEDIATE RESULTS HAS EVIDENCED THE VALIDITY OF DELINEATED WAYS OF COMBATING AGAINST PATHOPHYSIOLOGICAL DISTURBANCES, DEVELOPED AFTER BILATERAL TRUNK VAGOTOMIES AND ROUTINE GASTRIC RESECTIONS.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--FUNCTIONAL CHANGES OF THE PANCREAS IN PATIENTS WITH GASTRODUODENAL
PEPTIC ULCER -U-
AUTHOR--(04)-SAVELYEV, V.S., UMBRUMYANTS, A.A., KHRUSHCHOVA, V.M.,
PROKOPYEVA, ZH.F.
COUNTRY OF INFO--USSR
SOURCE--KHIRURGIYA, 1970, NR 4, PP 55-59
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DIGESTIVE SYSTEM DISEASE, PANCREAS, TRYPSIN, BLOOD SERUM,
INHIBITION, SURGERY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1983/1237 STEP NO--UR/0531/70/000/004/0055/0059
CIRC ACCESSION NO--AP0054132
UNCLASSIFIED

2/2 030

CIRC ACCESSION NO--AP0054132

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FUNCTIONAL STATE OF THE PANCREAS WAS STUDIED IN PATIENTS WITH GASTRODUODENAL ULCER. THE CHARACTER OF CHANGES WAS ASSESSED BY THE LEVEL OF TRYPSIN AND ITS INHIBITOR IN THE BLOOD SERUM IN 67 PATIENTS, IN 33 OF THEM DYNAMIC INVESTIGATIONS WERE CARRIED BEFORE AND AT DIFFERENT PERIODS AFTER THE OPERATION. THE DATA DERIVED TESTIFY TO THE FACT THAT IN PATIENTS WITH PEPTIC ULCER THERE IS ALSO SEEN A SIMULTANEOUS RISE OF THE INCRETORY ACTIVITY OF THE PANCREAS, APPARENTLY, AS THE RESULT OF NEUROREFLEX DISTURBANCES. CHANGES IN THE PANCREAS ARE, EVIDENTLY, THE CAUSE OF A NUMBER OF COMPLICATIONS OCCURRING IN THE IMMEDIATE AND REMOTE POSTOPERATIVE PERIODS. THIS SHOULD BE TAKEN INTO CONSIDERATION WHEN CHOOSING THE OPERATIVE TECHNIQUE.

UNCLASSIFIED

USSR

SAVEL'YEV, V. YA.

UDC: 535.8:535.241.13

"Electronic Stabilization of the Operating Point of an Electro-Optical Modulator of Light with Low Control Voltages"

Moscow, Radiotekhnika i Elektronika, Vol. 15, No 9, 1970, pp 1911-1915

Abstract: An electronic stabilization system is described which makes it possible to maintain the operating point of a modulator in a region close to total darkening. This type of system presupposes modulator operation with a pulsed unipolar signal of any polarity and amplitude ensuring any depth of modulation up to 100 percent. The principle circuit diagram of the stabilizing system is given. The stabilizing unit was tested together with a modulator based on an ADP crystal where the total illumination voltage of the modulator was 80 v. A nonstandard square pulse generator was used for the main signal source with a pulse duration of 215 microseconds and a 70 v amplitude. The pulse repetition frequency varied from 40-120 kc (off-duty factor from 10 to 3.3). Quality of stabilization (operating point position) was evaluated with respect to light intensity at the modulator output during pauses between pulses. It was shown that the system stabilizes the operating point in the region near minimal brightening at a variation of V_H voltage destabilization from -70 to +70 v and of the main signal off-duty factor up to 3.3. Under these conditions, light intensity during pauses between pulses at the edges of the V_H variation range is not more than 2 percent of the light intensity for total bright-

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USSR

SAVEL'YEV, V. YA., Radiotekhnika i Elektronika, Vol. 15, No 9, 1970, pp 1911-1915

ening. An inability to operate at the linear segment of the modulation characteristic, i.e. with a periodic signal is a shortcoming of the system. Prospects are excellent for using this stabilization system in conjunction with simple electro-optical systems such as modulators based on lithium tantalate, the operating point of which has been maintained up to now with the aid of electronic stabilization of the temperature of the ambient medium. Original article: three figures, four formulas, and six bibliographic entries.

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USSR

UDC 541.183.24:661.183.123

AL'TSCHULER, G. N., and SAVEL'YEV, YE. A., Novokuznetsk Scientific Chemical-
Pharmaceutical Research Institute

"Relative Exchange Capacity of Ion Exchange Resins as a Function of the pH
Value During the Sorption of Organic Ions"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 46, No 10, Oct 72, pp 2577-2579

Abstract: The equilibrium in the system consisting of ion exchange resin and
a strong or weak electrolyte was analyzed. A method was proposed for the cal-
culation of the pH value corresponding to the maximal relative exchange capacity
of the ion exchange resin towards the organic ion which agreed well with the
experimental data.

1/2 024
UNCLASSIFIED
TITLE--RADICAL FORMATION IN LOW TEMPERATURE RADIOLYSIS OF TRIBUTYL
PHOSPHATE AND SOME OTHER ORGANOPHOSPHORUS EXTRACTING AGENTS -U-
AUTHOR--(02)-VASHMAN, A.A., SAVELYEV, YU.I.
PROCESSING DATE--04DEC70
COUNTRY OF INFO--USSR
SOURCE--LENINGRAD, RADIOKHIMIYA, VOL 12, NO 1, 1970, PP 12-17
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--RADIOLYSIS, ORGANIC PHOSPHATE, FREE RADICAL, EPR, GAMMA
RADIATION, NITRIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605017/C09 STEP NO--UR/0186/70/012/001/0012/0017
CIRC ACCESSION NO--AP0140730
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140730
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHORS USED THE EPR METHOD TO STUDY THE FREE RADICALS FORMED IN THE GAMMA IRRADIATION OF TRIBUTYL PHOSPHATE AND SOME OTHER NEUTRAL ORGANOPHOSPHORUS EXTRACTING AGENTS, AS WELL AS RADICAL FORMATION IN IRRADIATED MIXTURES OF TRIBUTYL PHOSPHATE WITH NITRIC ACID AND WITH INERT DILUENTS. IT WAS FOUND THAT IN EXTRACTING AGENTS IRRADIATED IN AIR D SUB2 RADICALS ARE FORMED IN THE RELEASE OF RADICAL ELECTRON TRAPS. IN FROZEN MIXTURES OF TRIBUTYL PHOSPHATE WITH BENZENE AND DECANE THE FORMATION OF RADICALS OF THE EXTRACTING AGENT AND DILUT IS GOVERNED BY ADDITIVE LAW WITH VARIATIONS IN THE COMPONENT CONCENTRATION. AN EXCEPTION ARE MIXTURES OF TRIBUTYL PHOSPHATE WITH CARBON TETRACHLORIDE, WHICH DISPLAY STRONG DEVIATION IN ADDITIVITY IN THE FORMATION OF RADICALS OF DILUT WITH VARIATIONS IN ITS CONCENTRATION. IN IRRADIATED MIXTURES OF TRIBUTYL PHOSPHATE WITH 97PERCENT HND SUB3 THE EPR SPECTRA BELONG TO NO SUB2 AND NO SUB3 RADICALS FORMED IN THE RADIOLYSIS OF CONCENTRATED NITRIC ACID, AS WELL AS R RADICALS OF THE EXTRACTING AGENT. THE NO SUB2 AND R RADICALS ARE FORMED ADDITIVELY. THE NO SUB3 RADICALS ARE ELECTRON TRAPS, AND THEIR EPR SIGNAL BEGINS TO APPEAR ONLY IN THE REGION OF LOW CONCENTRATIONS OF TRIBUTYL PHOSPHATE. RADIATION CHEMICAL REACTIONS OF THE FORMATION OF FINAL RADIOLYSIS PRODUCTS OF TRIBUTYL PHOSPHATE ARE DISCUSSED.

UNCLASSIFIED

USSR

Free Radicals

VASHMAN, A. A., and SAVEL'YEV, YU. J.

UDC: 541.15:542.61

"Radical Formation in Low-Temperature Radiolysis of Tributyl Phosphate and Some Other Organophosphorus Extracting Agents"

Leningrad, Radiokhimiya, Vol 12, No 1, 1970, pp 12-17

Abstract: The authors used the EPR method to study the free radicals formed in the gamma irradiation of tributyl phosphate and some other neutral organophosphorus extracting agents, as well as radical formation in irradiated mixtures of tributyl phosphate with nitric acid and with inert diluents. It was found that in extracting agents irradiated in air O_2 radicals are formed in the release of radical electron traps. In frozen mixtures of tributyl phosphate with benzene and decane the formation of radicals of the extracting agent and diluent is governed by additive law with variations in the component concentration. An exception are mixtures of tributyl phosphate with carbon tetrachloride, which display strong deviation in additivity in the formation of radicals of diluent with variations in its concentration. In irradiated mixtures of tributyl phosphate with 97 percent HNO_3

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USSR

VASHMAN, A. A., and SAVEL'YEV, YU. I., Radiokhimiya, Vol 12, No 1, 1970, pp 12-17

the EPR spectra belong to $\dot{\text{NO}}_2$ and $\dot{\text{NO}}_3$ radicals formed in the radiolysis of concentrated nitric acid, as well as R radicals of the extracting agent. The $\dot{\text{NO}}_2$ and R radicals are formed additively. The $\dot{\text{NO}}_3$ radicals are electron traps, and their EPR signal begins to appear only in the region of low concentrations of tributyl phosphate. Radiation-chemical reactions of the formation of final radiolysis products of tributyl phosphate are discussed.

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USSR

UDC 621.317.4

GRABAR, L. I., MIKHAYLOVSKIY, V. N., SAVEL'YEV, YU. K., L'vov

"Device for Creating Highly Stable Magnetic Fields"

Kiev, Otbor i Peredacha Informatsii, No 27, 1971, pp 104-108

Abstract: A magnetic field intensity stabilizer with a low sensitivity threshold of $0.01\gamma/\text{hertz}^{1/2}$ developed and manufactured by the Institute of Physics and Mathematics of the USSR Academy of Sciences is investigated. The operating principle of the stabilizer is based on compensation for the variations of the magnetic field intensity relative to a previously given value. A sensor the operation of which is based on the Zeeman effect and optical pumping in helium [N. M. Pomerantsev, Geofizicheskaya apparatura, No 34, Nedra Press, Moscow, 1967] is used to measure the magnetic field intensity. The device stabilizes only the values of the modulus of the total magnetic field intensity vector.

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USSR

GRABAR, L. I. et al, Otbor i Peredacha Informatsii, No 27, 1971,
pp 104-108

The investigated device comprises four parts: a magnetically sensitive sensor, a measuring unit, compensating rings and rings with constant bias with a current source. A study was made of the basic factors leading to errors in stabilizing the magnetic field intensity in the case where the magnetic field intensity vector of both pairs of rings is vertical, and the vector of the Earth's magnetic field at the location of the sensor is inclined at about 70° as a result of which rotation of the resultant magnetic field vector occurs on creation of the compensating magnetic field by the rings.

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USSR

SAVEL'YEV, Yu. P., and DEDOV, G. S.

"Calculation of Base Pressure in Laminar Flow of a Plasma Past a Ledge"

Tr. Leningr. in-t aviats. priborostr. (Works of Leningrad Institute of Aviation Instrument Manufacture), 1970, vyp. 66, pp 106-110 (from RZh-Mekhanika, No 1, Jan 71, Abstract No 1B11 by Yu. M. Mikhaylov)

Translation: The article presents the calculation of the two-dimensional flow of an ideal conducting gas on a ledge. The magnetic pole is assumed to be directed perpendicularly to the velocity of undisturbed flow. There are no electric fields. The equations of magnetic hydrodynamics are reduced to dimensionless form and the dividing streamline is determined. Total pressure on the dividing streamline as well as static pressure behind the trailing shock wave are calculated. Equalizing these quantities, the authors calculate the angle of reversal of shock wave flow δ . It is assumed that angle δ corresponds to the angle of reversal of external flow around the edge of a ledge in a Prandtl-Mayer flow. This permits calculation of the Mach number before flow reversal, as well as base-pressure coefficient.

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USSR

SAVEL'YEV, Yu. P., and DEDOV, G. S., Tr. Leningr. in-t aviats. priborostr. (Works of Leningrad Institute of Aviation Instrument Manufacture), 1970, vyp. 66, pp 106-110 (from RZh-Mekhanika, No 1, Jan 71, Abstract No 1B11 by Yu. M. Mikhaylov)

Abstractor's Note. With the given configuration of two-dimensional flow and magnetic field, the assumption regarding the absence of electric fields leads to the discarding in the equations of terms which have the same order of magnitude as those which are retained.

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AP0046180

Abstracting Service:
CHEMICAL ABST.

5/70

Ref. Code
2R0065

91907b Alkaline removal of sulfur compounds and carbon dioxide from pyrolysis gas. Guseinova, Z. D.; Kostin, V. V.; Savel'ev, Yu. V.; Sarkisvants, G. T. (USSR). *Khim. Tekhnol. Tsvet. Mater.* 1970, 15(1), 31-2 (Russ). Pyrolysis gas contg. H₂, CH₄, 25.2, C₂H₆, 25.0, propylene 18.0, C₃H₈, 2.4, C₄, and higher hydrocarbons 9.0%, H₂S ≤ 1500, org. S compds. 20 mg/m³, and CO₂ 300 ppm was fed into a tray column 7 m high and 378 mm in diam. having 10 perforated trays. H₂S and part of the CO₂ were removed with 1.4-1.7 l. 2-4% NaOH soln./m³ at 40°. After leaving the top of the column, the gas was heated to 80° and fed into a similar packed column for complete removal of H₂S and CO₂ with 10 l. 5-8% NaOH soln./hr at 60-80°. The alk. solns. were changed after operating 1300-1500 hr. After purification, the pyrolysis gas was cooled and C₄ and higher hydrocarbons were sepd. The amts. of CO₂, H₂S, and org. S compds. were reduced to 6 ppm, traces, and 0.6 mg S/m³, resp. On decreasing the amt. of circulating alk. soln. to 0.7 l./m³ gas, the amts. of CO₂, H₂S, and org. S compds. were decreased to 18 ppm, 0.1 mg/m³, and 1.6 mg S/m³, resp. The polymn. was greatly decreased, excluding periodic cleaning of the app. The process is shown graphically. GGJR

REEL/FRAME
19781257

18

USSR

UDC 614.882-084.48

2
ALEKSEYEVA, M. I., MANIKOV, L. M., TSETLIN, V. M., MAL'KOV, O. S., SAVEL'YEVA, A. R., and STEPANOVA, O. L., All-Union Institute of Disinfection and Sterilization, Moscow

"An Aerosol Method for the Disinfection of Ambulances"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973, pp 137-141

Abstract: Evaluation was made of the efficacy of different concentrations of hydrogen peroxide (I) aerosols in disinfecting ambulance interior and exterior surfaces. The surfaces were contaminated with Staphylococcus aureus or anthrax spores to a density of 10^5 - 10^7 cells/cm². The results showed that complete sterilization of the staphylococcus cells on interior surfaces could be attained with 3% I aerosol in 30 min at -6° to 22° and with an aerosol volume of 100 ml/m², whereas sterilization of the surfaces contaminated with the spores required 10% I and a volume of 200 ml/m². For the exterior surfaced 6% I, 400 ml/m², for 30 min was required to sterilize surfaces contaminated with staphylococcus, and 10% I was required for surfaces contaminated with the anthrax spores. Essentially similar results were obtained with calcium hypochlorite (5%, 100 ml/m², 60 min) and formaldehyde (10% and 20% for staphylococcus and anthrax spores, respectively, 100 ml/m², 30 min).

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1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REDUCTION OF NITROBENZENE ON LOW PERCENTAGE PALLADIUM AND PLATINUM
PALLADIUM CATALYSTS ON ALUMINUM OXIDE -U-
AUTHOR-(93)-SAVELYEVA, G.A., SOKOLSKIY, D.V., POPOVA, N.M.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAU. NAUK KAZ. SSR, SER. KHIM. 1970, 20(2), 25-31
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITROBENZENE, CHEMICAL REDUCTION, PALLADIUM, CATALYST
ACTIVITY, PLATINUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0266 STEP NO--UR/0360/70/020/002/0025/0031
CIRC ACCESSION NO--AP0126038
UNCLASSIFIED

2/2 013

CIRC ACCESSION NO--AP0126038

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REDN. OF PHNO SUB2 WAS STUDIED IN
ETOH, H SUB2 O AND MECH, DIOXANE, NH SUB4 OH AT 20DEGREES OVER PD CATALYSTS
ON AL SUB2 O SUB3 (0-5 AT. PERCENT PD). ONLY CATALYSTS WITH LARGER THAN
1 AT. PERCENT PD WERE ACTIVE; ACCORDING TO THERMAL DESORPTION CURVES,
THESE CATALYSTS CONTAINED H DISSOLVED IN PD LATTICE. BY ADDN. OF PT
(AT. PERCENT PD PLUS PT REMAINING CONST.), THE ACTIVITY AND STABILITY OF
THE CATALYSTS INCREASED. FACILITY: INST. KHIM. NAUK, ALMA-ATA,
USSR.

UNCLASSIFIED

028

UNCLASSIFIED

PROCESSING DATE--23OCT70
CHOANAL POLYPS -U-

TITLE--CLINICO ROENTGENOLOGICAL CONFRONTATIONS IN
AUTHOR--(02)-LITVAKOVSKAYA, G.A., SAVELYEVA, K.A.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 1, PP 48-52

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TUMOR, RESPIRATORY SYSTEM, RADIOGRAPHY, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1980/0797

STEP NO--UR/0607/70/000/001/0048/0052

CIRC ACCESSION NO--AP0049021

UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--AP0049021

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXPERIENCE OF CLINICO ROENTGENOLOGICAL INVESTIGATION OF 129 PATIENTS WITH A DIAGNOSIS OF NASOPHARYNGEAL TUMOR HAS SHOWN THAT IN 6.2 PER CENT OF CASES A CHOANAL POLYP IS MISTAKEN FOR A TRUE NEOPLASM. IN VIEW OF THE PRINCIPAL DIFFERENCES IN THE TREATMENT OF THESE DISEASES THE AUTHORS ON THE BASIS OF CLINICO ROENTGENOLOGICAL CONFRONTATIONS IN 23 PATIENTS ARRIVED AT THE CONCLUSION ON THE GREAT DIAGNOSTIC VALUE OF THE X RAY METHOD IN THE RECOGNITION OF CHOANAL POLYPS. A DETAILED X RAY EXAMINATION, INCLUDING CRANIOGRAPHY (IN LATERAL, GENTONASAL AND AXIAL PROJECTIONS) AND TOMOGRAPHY (IN LATERAL AND FRONTO NASAL PROJECTIONS), ENABLES TO DEFINE THE TOPOGRAPHIC ANATOMICAL INTERRELATIONS OF THE PATHOLOGICAL FORMATION WITH THE NASOPHARYNGEAL WALLS AND NASAL CAVITY, AND IN A NUMBER OF CASES, IT HELPS TO REVEAL THE "PEDICLE" OF THE POLYP IN THE DIRECTION OF THE AFFECTED SINUS. CLINICO ROENTGENOLOGICAL CONFRONTATIONS TESTIFY TO THE SIGNIFICANT INCIDENCE OF THE INITIAL LOCALIZATION OF CHOANAL POLYP IN THE MAXILLARY SINUS, ROENTGENOLOGICALLY BEING REFLECTED BY AN ADDITIONAL ROUND SHADOW IN ANTERIOR REGIONS OF THE NASOPHARYNX "PEDICLE" OF THE POLYP COMMUNICATING WITH THE SHARPLY WIDENED NATURAL OPENING OF THE DARKENED SINUS.

UNCLASSIFIED

USSR

ORESHINA, M.D., SAVEL'YEVA, L.I., KHAZIYEV, N.N., SHEMYAKINA, G.N. (Ufa)

"Free Convection of a Fluid With an Initial Vertical Density Gradient,
With Heating on the Side"

Moscow, Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 1, 1971,
pp 123-126

Abstract: Some results of experimental research on free convection in solutions with nonuniform density with respect to height are presented. It is shown that in the presence of a vertical density gradient and side heating, the convective motion in solution is of a cellular character. The relationship of the height of individual cells to the temperature pressure and the density gradient is ascertained. 2 figures, 5 bibliographic entries.

1/1

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1/2 014
UNCLASSIFIED
TITLE--EVALUATING THE PLASTIC PROPERTIES OF NAIRIT -U- PROCESSING DATE--23OCT70
AUTHOR--(03)--KARAS, L.YA., KINDER, A.V., SAVELYEVA, L.I.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(2), 15-17
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--CHLOROPRENE, PLASTICITY, RUBBER WORKING MACHINERY, SYNTHETIC
RUBBER/(U)NAIRIT SYNTHETIC RUBBER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--1997/0459
CIRC ACCESSION NO--AP0119395
STEP NO--UR/0138/70/029/002/0015/0017
UNCLASSIFIED

2/2 014

CIRC ACCESSION NO--AP0119395
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT. A METHOD WAS DEVELOPED FOR DETG.
THE MILLING CONDITIONS OF NAIRIT (I) FROM LAB. TESTS BY USING I OF
INITIAL PLASTICITY (P SUB0) AND FINAL PLASTICITY (P SUB2) AFTER MILLING
I BETWEEN ROLLERS 2 MM APART. THE DIFFERENCE P SUB2-P SUB0 OFFERED A
MEANS TO DET. THE EMPIRICAL MILLING CONSTS. FOR 26 AND 60 IN. MILLS.
THE EXPTL. DATA AGREED WITH THE CALCD. RESULTS. FACILITY:
SVERDLOVSK. FILIAL NAUCH.-ISSLED. INST. REZIN PROM., SVERDLOVSK, USSR.

UNCLASSIFIED